

respective ear canal of the respective ear, and

a separate concha cushion mounted onto said concha section of said ear adapter body, said concha cushion being positioned on said ear adapter body so as to be interposed between the concha region of the ear and said concha section and to encircle the ear canal of the ear when said second end of said ear adapter body is inserted into the ear canal,

said concha cushion being deformable so as to conform to the concha region of the ear.

39. (New) The noise barrier apparatus of claim 38, wherein said noise barrier device holding apparatus further comprises:

ear tubes of a stethoscope.

Remarks

1. SUMMARY OF INTERVIEW

Applicant's attorney would like to thank the Examiner for granting the interview of 10/14/2005. During the interview, Applicant's attorney discussed the character of the cushion and pointed out that neither Huntress nor Scott taught a separate element for the cushion. The Examiner concurred that neither Scott nor Huntress taught a separate cushion and felt that, if this distinction were added to the claims, the claims would be allowable.

Applicant's attorney brought samples of a material that was suitable for use as the cushion. The first was a sample of "silly putty" material (clay-filled silicon gel) which, during transport to the interview, had been stored in a plastic container and had taken on the shape of the container. The material was removed and rolled into a ball. During the course of the interview the material crept under its own weight and eventually assumed pancake-like shape. Applicant's attorney pointed out that such behavior of a material is clearly not what would be considered an elastic material.

Applicant's attorney also brought an over-the-ear noise barrier device made by Applicant, which had a series of concentric rings forming a labyrinth structure. Each of the rings had a core of a silly putty material which was similar to the sample brought and was encased in a rubber sheath. When one of the rings of the labyrinth was locally depressed, it was deformed and slowly recovered.

These exhibits were brought to illustrate the features that are described in the specification of the application with the hope that a demonstration might complement the text and reduce the burden on the Examiner when reading the textual material.

Applicant's attorney briefly discussed Chaudhary et. al. for its teaching and pointed out that there was no teaching of the material taught therein being used for a cushion for ear phones. He pointed out that there must be some teaching to combine this reference with Scott or Huntress. The Examiner indicated that she felt that the requirement for combining had been met.

Applicant's attorney also inquired about Chifei et. al. and the motivation for the citation made by the Examiner, since the text section cited did not appear to be germane to the position made by the Examiner. The Examiner noted that the reference in question should be Jones and apologized for her mistake. Applicant's attorney thanked her for the information and said that he

would review the Jones patent and would comment thereon in his response.

Applicant's attorney thanked the Examiner for providing an interview. He felt that the interview was helpful to Applicant's attorney in gaining an appreciation as to the problems that the Examiner was having in appreciating the specification and claims. He hoped that the discussion and the exhibits would be helpful to the Examiner in better understanding the specification.

2. COMMENTS ON INTERVIEW

Before Applicant's attorney responds to the issues the Examiner raised with respect to the claims presented in the amendment filed April 8, 2005, Applicant's attorney would like to further comment on the subject matter discussed during the interview. To assist in facilitating this discussion, enclosed is a collection of time dependant photographs of the samples which were brought to the interview; the photographs show the time dependant response to a force which introduced deformation of the cushion materials of the present invention. For the putty material, the force was gravity and gravity alone was sufficient to cause the putty to deform under its own weight (see Exhibit A.) An ear cup cushion which was partially plastically deformable was also provided, which employed a core of a deformable putty encased in an elastic sheath, this providing a composite material which was partially plastically deformable. While such a cushion does not plastically deform under its own weight, it was demonstrated that it was deformable and, when deformed, would recover in due course; however, it did not have the spring-back associated with an elastic material (see Exhibit B). Applicant's attorney also brought to the interview a classic ear cup cushion, such as used by Bose, which was made of silica gel in an elastic sheath. When such was deformed, it quickly recovered. Also, an elastic foam cushion was brought, which had similar recovery properties as the Bose cushion. The spring-back for the

latter materials was so rapid that Applicant's attorney did not have the ability to capture the time frame of the recovery with his digital camera.

While the Examiner indicated during the interview that a very broad standard could be used when combining references, Applicant's attorney would like to remind the Examiner at this time that, when reviewing the present application, she has a duty not to use the present application's teaching to influence her selection of art to combine. This duty is set forth in the MPEP. It is improper for the Examiner, in reviewing an application, to use the application as a roadmap to develop the invention from the prior art where there is no suggestion in the prior art of combining the claimed elements. (See MPEP 2143 and MPEP 2143.01.)

Furthermore, as pointed out in the amendment filed 08/04/2005, there is case law to support that there is a need for a teaching to combine the references to support an assertion of obviousness. *In re Fine* 5 USPQ 2d 1596, 1598 (Fed. Cir. 1988) maintained that the PTO can satisfy its burden to establish a *prima facie* case of obviousness quoting *In re Lahu*, 747 F.2d 703, 705; 223 USPQ 1257, 1258 (Fed Cir. 1984):

"... only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references."

In re Fine 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) also stated:

"One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

More recently, *In re Fritch* 23 USPQ 2d 1780 supported the position that the mere fact that the prior art may be modified to reflect the features of the claimed invention does not make the claimed invention obvious unless the desirability of such modification is suggested in the prior art.

The court in *W.L. Gore & Associates, Inc. v. Garlock, Inc.* 220 USPQ 303, 312-313 (Fed. Cir. 1983) stated:

"To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."

With this background, Applicant's attorney has prepared the following remarks that will address the support for the change in claim language, as well as address the issues raised by the Examiner in her action.

3. AMENDMENT OF THE CLAIMS

Withdrawn claims 16, 19, 20 and 31-36 are cancelled by the present amendment.

New claims 37 and 38 have been drafted to more clearly and distinctly claim the invention by more explicitly pointing out that the concha cushion is separate from the ear adapter body. However, in view of the Examiner's statement that the separate concha cushion would be distinguished over the structures of Huntress and Scott, these claims do not include the distinction of characterizing the cushion material. Support for the explicit limitation of the

concha cushion being separate is found in the specification in the second paragraph on page 4, the second full paragraph on page 11, the first and second full paragraphs on page 12, the fourth paragraph on page 22, the second and third full paragraphs on page 29, and in Figures 3 - 6C and 13 - 20. Claims 17 and 23 have been appropriately amended so as to be dependent on claims 37 and 38, respectively, so as to only introduce the limitation as to the character of the cushion material. Thus, these claims contain all their previous limitations, with the additional explicit limitation that the concha cushion be separate. Claim 39 parallels claim 29, and sets forth the cushion as a separate element again without further limitations on the cushion material.

The Examiner indicated at the interview that she felt that patentability of the present invention over Scott and Huntress, if the cushion were separate, was based on structure rather than on the material of the cushion. For this reason, claims 37 and 38 do not have the limitations on the material of claims 17 and 23.

4. EXAMINER'S RESPONSE TO ARGUMENTS OF EARLIER AMENDMENT

Applicant's attorney will first respond to point 19 of the office action, since the Examiner's remarks regarding the distinction of the materials are relevant to the arguments made on the individual claims. The Examiner is requested to reconsider the arguments made by Applicant's attorney with the regard to the characterization of the materials claimed in the present application. The claimed materials are clearly distinct in that their response to deformation is not that of a rubber-like material as taught by Huntress, or an elastic plastic material, as taught by Scott.

With regard to Examiner's comment on page 11 of her response that "Huntress suggests 'deformable rubber' which clearly falls into the definition as provided by applicant", it should be

pointed out first of all that a “rubber” is defined as follows:

rubber n. 2 an *elastic* substance produced by coagulating and drying the milky sap (*latex*) of various tropical plants (Webster’s New World Dictionary, Third College Edition, Simon & Schuster 1989, p. 1171, emphasis added.)

Furthermore, “elastic” is defined as:

elastic adj. 1 able to *spring back* to its original size, shape, or position after being stretched, squeezed, flexed, expanded, etc.; flexible; springy (Webster’s New World Dictionary, Third College Edition, Simon & Schuster 1989, p. 435, emphasis added.)

and “spring” is defined as:

spring vi. 1 to move suddenly and rapidly . . . (Webster’s New World Dictionary, Third College Edition, Simon & Schuster 1989, p. 1298.)

These definitions for “rubber” and “elastic” would not be met by a material which returns to its normal shape slowly and thus would not fall within the scope of claims 17 and 23 as presently amended or as previously amended.

It should also be noted that the present application specifically distinguishes the claimed material over a rubber (see page 15, second full paragraph).

With regard to the Examiner’s comment that “Scott suggests to use any plastic material

(col. 2, lines 43-45) or elastic plastic material”, such is not suggested in Scott. The cite is taken out of context by the Examiner and does not accurately portray the characterization of the material suggested by Scott. This cite is the second sentence of the following paragraph:

“The *preferred plastic* used for this earmold is a *styrene-rubber copolymer* sold under the trade name KRATON G2712X having a durometer softness of 42A. However, the earmold can be made of *other plastic* so long as the plastic is light enough to float and soft enough to be comfortable to the wearer.” (Column 2, lines 40-45, emphasis added.)

First of all, Scott does not state “*any* plastic”, only “other plastic”, and with the implication of the previous sentence, the expectation would be that it would be another elastic material similar to the Styrene-rubber copolymer KRATON G2712X. Furthermore, as pointed out in the previous amendment, this position is further supported by the first paragraph of the Detailed Description, where Scott characterized the material as:

. . . a relatively soft and flexible *elastic* plastic, such as styrene-rubber copolymer
(See column 1, lines 64 -66. Emphasis added.)

The characterization of the material as being an elastic plastic is also found in both the abstract and claim 1, the only independent claim of Scott.

With regard to the Examiner’s position that Scott teaches a sound barrier, Applicant’s attorney maintains that if the purpose were to block noise, then Scott would not have provided a hole in the ear device. While the Scott device may inherently reduce noise to some degree, such is not the purpose of the Scott device, and thus there is no motivation to modify the Scott device to increase its ability to block noise.

With regard to the Examiner's position that Applicant's definition of a partially plastic material would include elastic materials such as taught by Huntress and Scott since Applicant does not define how slowly the material returns to its original shape after being deformed, such is not the case. While the cushion material of the present invention may, in some cases, be able to recover, in no case are they described as springing back to their original shape, and in no case will they do so.

It is felt that these differences in recovery characteristics would be sufficient to allow one skilled in the art to characterize a material as being either elastic or partially plastically deformable. The materials employed for the cushion of the present invention do not "spring back" to shape when deformed. As shown in the series of photographs of the ear cushion, the cushion at 30 seconds had still not returned fully to its original shape after being deformed; this slow recovery would not be considered as "springing" back to shape.

In view of the Examiner's position for the allowability of claims 17 and 23 if the cushion were separate and distinct from the remaining structure, such distinction cannot be based on the character of the material of the cushion. While Applicant's attorney feels that the material does distinguish the present invention, for the reasons set forth above, new independent claims 37 and 38 have been provided in view of the position of the Examiner, and thus these claims include the separate cushion and other limitation of claims 17 and 23 with the exception of the characterization of the material.

Applicant's attorney would also like to point out that the distinction between the partially plastic materials such as are suitable for use in the cushion of the present invention and elastic materials such as a rubber is pointed out in the specification, which notes that the damping coefficient for a linear spring, which would correspond to an elastic material, would be zero (see page 15, at the top - also see page 18, second full paragraph). In fact, in the last paragraph of

page 18, the Applicant continues on to point out that materials may have less than perfect elasticity, and thus discusses materials with a damping ratio of 0.15 as not being suitable for the cushion of the present invention; the elastic materials taught by Huntress and Scott would be expected to have even lower damping ratios, which approach zero.

5. FORMAL MATTERS

With regard to the Point 1 of the office action, claims 16, 19, 20 and 31-36, which the Examiner restricted as being directed to an independent or distinct invention, are cancelled by the present amendment.

With regard to the matter raised under Point 2 of the office action, Applicant's attorney pointed out to the Examiner that the references which were not included in the IDS were those which had been supplied previously during prosecution of the parent applications. It was the understanding of Applicant's attorney that the Examiner would obtain copies from the earlier files to include in the present application's file.

6. REJECTIONS OF CLAIMS

With regard to the remaining claims, which are directed to the in-the-ear species, they can be clearly distinguished over the prior art of record on the basis of both the geometric distinctions and the distinction in the material used to fabricate the cushion. The rejections set forth in the Examiner's action are addressed below in order according to the secondary references cited, rather than in the order in which they appear in the office action; this approach is felt most straightforward in view of the number of references cited by the Examiner against the various

claims. While the remarks regarding the dependent claims should not be necessary for distinction, in view of the allowability of the independent claims, all the points raised in the Examiner's action are addressed to assure that the present amendment is considered fully responsive.

With regard to Points 4 and 5 which address claim 17, the structure of claim 17 is inherently different, since both the Scott and the Huntress patents teach a one-piece device which has, at best, a free standing element which is connected to and integral with the forward region of the body in advance of the concha section of the device. This distinction is explicitly set forth in claim 17 as presently amended to depend upon claim 37, where this limitation is introduced. Thus, in view of the Examiner's comments at the interview, that the use of a separate cushion was felt to be distinct, the structure as presently claimed should be allowable over the references of Scott and Huntress. In view of this Claim 37 has been added as discussed above.

Additional geometric distinctions in the structure of the in-the-ear devices were set forth in the amendment filed 09/15/2004 (see pages 15 and 17), and were never addressed by the Examiner; these distinctions are still felt to apply, but should not be needed in view of the distinction of the separate cushion explicitly set forth in claim 37, upon which claim 17 is now dependent.

Furthermore, both Huntress and Scott teach the use of an elastic material, as discussed above. Not only do they so teach such, but the patents teach that the device is maintained in position by employing an elastic material. Such is not a refinement of the present invention, since the cushion of the claimed structure is supported. Furthermore, the cushion of the present invention is not a thin sheet which lies along the concha surface. Thus, these patents teach away from the present invention, which requires a material which is clearly not elastic in character. It is also questionable whether the Huntress or Scott devices would be retained in the ear as taught

if a material such as presently claimed were employed in place of the elastic materials taught.

With regard to Point 7 which addresses claims 23 and 29, the distinctions set forth above with regard to claim 17 are felt to apply as well to claim 23, which contains the same limitations. Under point 7, the Examiner combines Huntress with Clark for its teaching “using the headband (12) and earcups to further eliminate noise”. Applicant’s attorney respectfully disagrees that the teachings are suitable for combination, for various reasons. First, there would be no motivation, since the device of Huntress is made of a resilient material and thus would not need a headband to maintain it in place. Secondly, the structure of the present invention set forth in these claims does not have earcups, as is taught in Clark.

With regard to Point 13 which addresses claims 23 and 29 with regard to the combination of Scott with Clark rather than Huntress and Clark, it should be pointed out that Scott does not teach a device designed to reduce noise, and thus there would be no motivation to modify the Scott device “to further reduce noise”. Applicant’s attorney also respectfully disagrees that the teachings are suitable for combining for various reasons set forth above in the discussion of Point 7. As with Huntress, there would be no motivation to combine since Scott also is a device made of a resilient material and thus would not need a headband to maintain it in place. Furthermore, it should be noted that Scott teaches the earmold as supporting a headset (Scott recites this as a primary object of the invention, and does not address noise attenuation as a purpose), not being supported thereby. In fact, Scott specifically states that the invention eliminates the need for a headband or arms (see column 1, lines 10-15). Also, once again the claimed device of the present invention does not have earcups, as is thought in Clark.

With regard Point 8, which addresses claim 22, Applicant’s attorney agrees that Huntress does not teach a sound insulating material having a damping ratio greater than 0.75. While the Chaudhary et al. patent does teach such an insulating material that is soft and flexible, there is no

teaching that it is a rubber-like material or that it would be a suitable material for incorporation into the device of Huntress. Furthermore, there is no indication that the material can be formed with the geometric shapes demanded by Huntress or, for that matter, the shape of the present invention. In fact, the patent notes "The present foam is particularly suited to be formed into a plank or sheet . . ." (Column 15, lines 35 and following), and the only teaching of making molded structures is by expanding beads of the material (see column 10, lines 60-63, and column 12, line 55 through column 13, line 3). There is no suggestion that such techniques could be used to mold devices such as taught by Huntress or, for that matter, for any applications to provide an ear noise barrier. The only teaching of the use of a damping material for a noise barrier for the ear is found in the teaching of the present application, and the Examiner is reminded that it is improper to use applicant's application as a roadmap to develop the invention from the prior art where there is no suggestion in the prior art of combining the claimed elements. (See MPEP 2143 and MPEP 2143.01.). While Chaudhary et al. teach that thin sheets can be formed, there is no teaching that the material can be molded into articles with thin sections, such as would be required to form Huntress devices. None of the examples of items which can be made from the Chaudhary et al. material listed have any similarity in structure to the Huntress devices.

With regard Point 14 which addressees claim 22, Applicant's attorney agrees that Scott also does not teach a sound insulating material having a damping ratio greater than 0.75. While the Chaudhary et al. patent does teach such an insulating material that is soft and flexible, there is no teaching that it is a soft flexible elastic plastic that would be suitable for incorporation into the devices of Scott. Also, there would be no motivation to combine, since the Scott device is not designed to function as a sound blocking device. Furthermore, as discussed above with regard to Huntress, there is no indication that the material can be formed with the geometric shapes demanded by Scott or, for that matter, the shape of the present invention. It should be noted that, while Chaudhary et al. teach a number of applications for their foam (see column 15 lines 49-65),

none of the examples listed have any similarity in structure to the Scott device.

With regard to Point 9 which addresses Claims 25 and 27, Applicant's attorney agrees that Huntress teaches a device for attenuating noise but respectfully disagrees that Huntress teaches a cushion for attenuating noise. The cite made by the Examiner refers to a flange. This flange, in order to be effective, is made of an elastic material. The materials of the present invention are not elastic, as was demonstrated at the interview, and had such a material been used it would not perform the function of the flange of the Huntress patent. As pointed out in the discussion of Points 7 and 8, there would be no motivation to combine either Clark or Chaudhary et al. with Huntress, and it is improper to use the present invention to provide the basis to combine references.

With regard to Point 15, the remarks made above with regard to Point 9 apply with equal force. Furthermore, there is an additional basis as to the lack of motivation to combine the references, and that is that the device of Scott is not designed to block sound but only to support a head set or stethoscope.

With regard to Point 10 which addresses claim 21, Applicant's attorney agrees that Huntress does not show a sheath. While Jones (mis-cited in the office action as Chifei et al.) does show a skin as part of the structure for a cushion, this skin is design to be used over the ear or around the entrance to the ear canal, not to reside within the ear. Furthermore, the foam of the Jones patent has atypical properties in response to pressure (see column 2 lines 43-47) and there is no teaching that such skin would provide any benefit if applied over the elastic material taught by Huntress. Furthermore, incorporating a skin over the material of the Huntress device would complicate fabrication. Thus, it is felt that there would be no motivation to incorporate the skin of Jones into the Huntress device.

With regard to Point 16 which again addresses claim 21, the arguments presented above with regard to the combination of Huntress with Jones apply to Scott as well, since Scott teaches the use of an elastic plastic. There is no teaching or suggestion in Jones that the skin would provide any benefit if applied over a material such as employed in the Scott device. Furthermore, incorporating a skin over the material of the Scott device would complicate fabrication and bring no benefit, since the Scott device is not intended to block noise. Thus, it is felt that there would be no motivation to incorporate the skin of Jones into the Scott device.

With regard to Point 11 which addresses claim 24, the Examiner's remarks are the same as the remarks made in Point 10 for claim 21, and thus the comments set forth above in response to 21 under Point 10 are felt to apply equally to Point 11.

Similarly, Point 17 of the office action repeats the remarks made under Point 16 referring to claim 21, and the remarks made above with regard to Point 16 are felt to apply to Point 17 as well.

With regard to point 12, which addresses claims 26, 28 and 30, since no new arguments are made beyond those of Points 9 and 11 which are addressed above, no further comments are felt to be needed.

Similarly, with regard to Point 18 which addresses claims 26, 28 and 30, no new arguments are made beyond those of Points 15 and 17 addressed above, and it is felt that no further comments are needed.


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4. CONCLUSION

For the reasons discussed above, it is felt that all remaining claims should be in a condition for allowance, and such allowance is respectfully requested.

Enclosed herewith is a petition for a two-month extension of time in which to respond.

Respectfully submitted,
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